

IN THE CLAIMS

1-14. (Cancelled)

15. (Currently Amended) A vaccine formulation suitable for mucosal administration comprising:

(a) a mixture of a first vaccine antigen which is Hepatitis B virus surface antigen (HBsAg), and

(b) a second vaccine antigen which is a viral nucleocapsid or a virus-like particle; wherein said HBsAg has an adjuvant effect on the second vaccine antigen, and wherein said first and second vaccine antigens are each present from 0.001mg to 1mg.

16. (Previously Presented) The vaccine formulation according to claim 15, wherein the viral nucleocapsid is the nucleocapsid antigen of Hepatitis B virus.

17. (Currently Amended) The vaccine formulation according to claim 15, wherein the virus-like particle-viral nucleocapsid is the virus-like particle nucleocapsid-antigen of Human Papilloma virus (HPV).

18. (Previously Presented) The vaccine formulation according to claim 15, wherein the viral nucleocapsid is the nucleocapsid antigen of Hepatitis C virus.

19-20. (Cancelled)

21. (Previously Presented) The vaccine formulation according to claim 15, wherein the vaccine formulation is suitable for nasal administration.

22. (Previously Presented) The vaccine formulation according to claim 15, wherein the vaccine formulation is suitable for use as a therapeutic vaccine against Hepatitis B virus (HBV) infection.

23. (Previously Presented) The vaccine formulation according to claim 15, wherein the vaccine formulation is suitable for use as a preventive vaccine against Hepatitis B virus (HBV) infection.

24. (Previously Presented) The vaccine formulation according to claim 18, wherein the vaccine formulation is suitable for use as a preventive vaccine against Hepatitis C virus (HCV) infection.
25. (Previously Presented) The vaccine formulation according to claim 17, wherein the vaccine formulation is suitable for use as a preventive vaccine against Human Papilloma virus (HPV) infection.
26. (Previously Presented) The vaccine formulation according to claim 18, wherein the vaccine formulation is suitable for use as a therapeutic vaccine against Hepatitis C virus (HCV) infection.
27. (Previously Presented) The vaccine formulation according to claim 17, wherein the vaccine formulation is suitable for use as a therapeutic vaccine against Human Papilloma virus (HPV) infection.
- 28-37. (Cancelled)
38. (Currently Amended) A vaccine formulation suitable for mucosal administration, comprising:
 - (a) a mixture of a first vaccine antigen which is Hepatitis B virus surface antigen (HBsAg), and
 - (b) a second vaccine antigen and a third vaccine antigen,wherein the vaccine antigens are each present from 0.001mg to 1mg.
39. (Currently Amended) The vaccine formulation according to claim 38, wherein the second vaccine antigen is an antigen of a viral nucleocapsid or a virus-like particle.
40. (Currently Amended) The vaccine formulation according to claim 39, wherein the virus-like particle-viral nucleocapsid is the virus-like particle nucleocapsid antigen of Human Papilloma Virus (HPV).
41. (Previously Presented) The vaccine formulation according to claim 39, wherein the third vaccine antigen is Hepatitis B virus core antigen (HBcAg).

Application Serial No. 09/857,402

Filing Date: June 1 2001

Docket: 976-11 PCT/US/RCE

Page 4 of 10

42. (New) A method for treating or preventing a viral infection comprising administering mucosally a vaccine formulation according to claim 15.